REMARKS

Amendment to the Specification

The specification has been amended to include reference to the parent, provisional application. No new matter has been added.

Amendments to the Claims

Claims 1-29 were pending. Claims 13-29 have been canceled without prejudice as being drawn to a non-elected invention. Claim 9 has been canceled without prejudice. Claims 1, 4, 8, and 11 have been amended. New claim 30 has been added.

Amended claim 1 specifies that the iron chelator delivery system comprises "at least one cardiac protein." Support for this amendment is be found in the specification, for example, at page 7, lines 8-11.

Amended claim 4 specifies that the liposome has "at least one bilayer." Support for this amendment is found in the specification, for example, at page 5, lines 32-37.

Claims 8 and 11 are amended to provide proper antecedent basis.

Claim 8 is further amended to specify that the antibodies are "are attached to the lipid carrier." Support for this amendment is found in the specification, for example, at page 7, lines 5-13.

New claim 30 is drawn to the iron chelator delivery system of claim 1, wherein the cardiac protein is selected from the group consisting of myosin, actin, tropomyosin, troponin, and myosin light chain. Support for new claim 30 can be found in the specification, for example, at page 4, lines 33-35.

New claims 31 and 32 are drawn to an iron chelator delivery system, comprising an iron chelator, a lipid carrier, and at least one carbohydrate receptor, *e.g.*, a hepatocyte asialoglycoprotein receptor, a Kupfer cell mannose receptor, and a liver endothelial cell. Support for new claims 31 and 32 can be found in the specification, for example, at page 14, lines 12-20.

The foregoing amendments should in no way be construed as an acquiescence to any of the Examiner's rejections and were done solely to expedite prosecution. Applicant reserves the right to pursue the claims as originally filed in this or a separate application(s). No new matter has been added.

Attached hereto is a marked-up version of the changes made to the specification and the claims by the current amendment. The attached page is captioned "Version with Markings to show changes made." Also attached hereto is a copy of all the pending claims as amended. This attached page is captioned "Pending Claims."

Objection to the Specification

The specification is amended to include reference to the parent, provisional application. Accordingly, the objection to the specification is now moot.

Claim Objections

Claim 5

With regard to the Examiner's objection to claim 5, Applicant respectfully points out that, in addition to unilamellar and multilamellar lipid vesicles, other types of liposomes exist, *e.g.*, paucilamellar lipid vesicles. Accordingly, claim 5 appropriately narrows the scope of claim 4.

Claims 8 and 11

Claims 8 and 11 are amended to provide proper antecedent basis. Claim 8 is further amended to specify the location of the antibodies. Accordingly, the objections to claims 8 and 11 are now moot.

Rejection of Claims 1, 2, 4-7, and 9-12 Under 35 U.S.C. §102(b)

Applicant respectfully traverses the rejection of claims 1, 2, 4-7, and 9-12 as being anticipated under 35 U.S.C. §102(b) by Lau *et al.*, Rahman *et al.* (1981), or Rahman *et al.*

(1980). However, to expedite prosecution, independent claim 1 has been amended to specify that the iron chelator delivery system includes at least one cardiac protein. The cited reference fails to teach or suggest the claimed invention. Accordingly, the rejection is now moot.

Rejection of Claims 1, 2, 4, 5, and 7 Under 35 U.S.C. §102(b)

Applicant respectfully traverses the rejection of claims 1, 2, 4, 5, and 7 as being anticipated under 35 U.S.C. §102(b) by Hopkins *et al.* or Blake *et al.* (EP 0 068 314). However, to expedite prosecution, independent claim 1 has been amended to specify that the iron chelator delivery system includes at least one cardiac protein. The cited reference fails to teach or suggest the claimed invention. Accordingly, the rejection is now moot.

Rejection of Claims 1-7 Under 35 U.S.C. §102(a)

Applicant respectfully traverses the rejection of claims 1, 2, 4, 5, and 7 as being anticipated under 35 U.S.C. §102(a) by Postma *et al.* However, to expedite prosecution, independent claim 1 has been amended to specify that the iron chelator delivery system includes at least one cardiac protein. The cited reference fails to teach or suggest the claimed invention. Accordingly, the rejection is moot.

Rejection of Claims 1, 8, and 10 Under 35 U.S.C. §103(a)

Applicant respectfully traverses the rejection of claims 1, 8, and 10 as being obvious under 35 U.S.C. §103(a) based on Lau *et al.*, Rahman *et al.*, or Hopkins *et al.*, in view of Kilbanov *et al.* However, to expedite prosecution, independent claim 1 has been amended to specify that the iron chelator delivery system includes at least one cardiac protein. None of the cited references, either alone or combination, teaches or suggests the claimed invention. Accordingly, the rejection is moot.

Rejection of Claims 1-7, 10, and 11 Under 35 U.S.C. §102(b)

Applicant respectfully traverses the rejection of claims 1-7, 10, and 11 as being anticipated under 35 U.S.C. §102(b) by Allen *et al.* (U.S. Patent No. 4,920,016) in light of Lau *et al.* and Ritter *et al.* (U.S. Patent No. 5,854,007). However, to expedite prosecution, independent claim 1 has been amended to specify that the iron chelator delivery system includes at least one cardiac protein. The cited references fail to teach or suggest the claimed invention. Accordingly, the rejection is moot.

CONCLUSION

In view of the foregoing amendments and remarks, reconsideration and withdrawal of all rejections, and allowance of the instant application with all pending claims are respectfully requested. If a telephone conversation with Applicant's attorney would help expedite the prosecution of the above-identified application, the Examiner is urged to call Applicant's attorney.

Respectfully submitted,
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Date: 12 Feb 03

Version with Markings to show changes made

Claims 13-29 have been canceled as being drawn to a non-elected invention.

Claim 9 has been canceled without prejudice.

Claims 1, 4, 8, and 11 have been amended as follows:

1. (Amended) An iron chelator delivery system, comprising an iron chelator, ~~and~~ a lipid carrier, and at least one cardiac protein.

4. (Amended) The iron chelator delivery system of claim 1, wherein the lipid carrier is a liposome having at least one bilayer.

8. (Amended) The iron chelator system of claim 1, wherein the lipid carrier further comprises antibodies specific to a cardiac ~~proteins~~ protein, wherein the cardiac ~~proteins~~ protein ~~are~~ is selected from the group consisting of cardiac myocyte proteins, vasculature proteins, endothelial cells, and matrix proteins, wherein the antibodies are attached to the lipid carrier.

11. (Amended) The iron chelator system of claim 4, wherein the iron chelator is encapsulated between the liposome ~~lamellae~~ bilayers or intercalated within the ~~lamellae~~ bilayers.

New claims 30-32 have been added as follows:

30. (New) The iron chelator delivery system of claim 1, wherein the cardiac protein is selected from the group consisting of myosin, actin, tropomyosin, troponin, and myosin light chain.

31. (New) An iron chelator delivery system, comprising an iron chelator, a lipid carrier, and at least one carbohydrate receptor.

32. (New) The iron chelator delivery system of claim 31, wherein the carbohydrate receptor is selected from the group consisting of a hepatocyte asialoglycoprotein receptor, a Kupfer cell mannose receptor, and a liver endothelial cell.

Pending Claims

1. An iron chelator delivery system, comprising an iron chelator, a lipid carrier, and at least one cardiac protein.

2. The iron chelator delivery system of claim 1, wherein the iron chelator is selected from the group consisting of Desferrioxamine, deferipone, PIH, Rhodotorulic acid, HBED, HBPD, 2,3-dihydroxybebzoic acid, DTPA, and iron chelators produced by bacterial siderophores.

3. The iron chelator delivery system of claim 1, wherein the concentration of the iron chelator is about 1μM to about 100mM.

4. The iron chelator delivery system of claim 1, wherein the lipid carrier is a liposome having at least one bilayer.

5. The iron chelator delivery system of claim 4, wherein the liposome is multilamellar or unilamellar.

6. The iron chelator system of claim 4, wherein the size of the liposome is about 10nM to about 10 microns.

7. The iron chelator system of claim 1, wherein the lipid carrier further comprises cationic or anionic charge groups.

8. The iron chelator system of claim 1, wherein the lipid carrier further comprises antibodies specific to a cardiac protein, wherein the cardiac protein is selected from the group consisting of cardiac myocyte proteins, vasculature proteins, endothelial cells, and matrix proteins, wherein the antibodies are attached to the lipid carrier.

10. The iron chelator system of claim 1, wherein the lipid carrier is galactosylated or mannosylated.

11. The iron chelator system of claim 4, wherein the iron chelator is encapsulated between the liposome bilayers or intercalated within the bilayers.

12. The iron chelator system of claim 4, wherein the iron chelator is encapsulated within the central cavity of the liposome.

30. The iron chelator delivery system of claim 1, wherein the cardiac protein is selected from the group consisting of myosin, actin, tropomyosin, troponin, and myosin light chain.

31. An iron chelator delivery system, comprising an iron chelator, a lipid carrier, and at least one carbohydrate receptor.

32. The iron chelator delivery system of claim 31, wherein the carbohydrate receptor is selected from the group consisting of a hepatocyte asialoglycoprotein receptor, a Kupfer cell mannose receptor, and a liver endothelial cell.